REMARKS/ARGUMENTS

Claims 1-23 were pending in this application. Within the Office Action, claims 1-13 are rejected under 35 U.S.C. § 102(e), and claims 14-23 are rejected under 35 U.S.C. § 103(a). Claims 1-23 are still pending. The Applicants respectfully request reconsideration in light of the arguments made below.

Rejections under 35 U.S.C. § 102(e)

Within the Office Action, claims 1-13 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,826,613 to Wang et al. The Applicants respectfully traverse this rejection.

In a nutshell, Wang is directed to methods of and devices for taking a data request destined for one device and handing it off to another device that can handle the request, using what it calls Transport Connection Handoff (TCH). Wang is directed to changing the device (an endpoint) to which the data request is directed. In contrast, the present invention is directed to determining a route to a destination, be it a device or a group of devices, based on a performance of the route. Routes generally include multiple intermediate devices or "hops."

In one embodiment, Wang discloses a switch to transparently "hand off" a data request to a storage device. Wang also discloses that TCH can be used for load balancing: If one device has too high of a load, a data storage request to that device is handed off to another device. Using load balancing, the *load on a device* is checked, not *the performance of a path*. The two are different. A load relates to activity on a single device, but a path relates to a route that traverses multiple devices.

Wang does not disclose multiple routing intelligence units (RIUs), or any similar element, for communicating among themselves by exchanging routing performance information. The only "multiple devices" that Wang discloses are the end devices (e.g., Figure 2A, 130, 135, and 236), intelligent disks. And while Wang discloses that these devices may communicate among themselves (e.g., col. 20, lines 20-25), because they are end devices (end points) they cannot be considered RIUs, as that term is used in the present invention.

Claim 1 is directed to a communications back-channel, for coordinating routing decisions. Claim 1 recites, in part, a plurality of routing intelligence units (RIUs) that each includes software for controlling a distinct subset of a plurality of networking devices. Each RIU includes one or more coordination processes for exchanging *routing performance information*

with the other RIUs. As explained above, Wang does not disclose RIUs, or any similar structure. Also, Wang discloses using load information not routing performance information. For at least these reasons, claim 1 is allowable over Wang.

Claims 2-13 all depend on claim 1. Because claim 1 is allowable over Wang, claims 2-13 are all also allowable as depending on an allowable base claim.

Response to arguments made in the Office Action

Within the Office Action, it is stated that at column 21, lines 48-67, Wang describes "one coordination process for exchanging routing performance information with the plurality of routing intelligence units" (underlining in original). As explained above, Wang does not disclose *routing* performance information. At column 21, lines 48-67, Wang merely discloses that a switch in accordance with his invention can be used as a fail-over or as a load balancer with additional duty for stand by.

Within the Office Action, it is also stated that limitations recited in claims 8-10 are taught in Wang because they are inherent to Network Address Translation (NAT). These statements rest on a misunderstanding of NAT.

NAT is generally used to translate source addresses of data packets originating from a protected network. In accordance with NAT, a NAT router receives data packets from multiple internal hosts on a protected network. The NAT router translates the source addresses of the internal hosts to different, global (e.g., "registered") addresses. The reverse process is performed for data packets sent to the internal hosts. Thus, using NAT, the actual addresses of the internal hosts are hidden to outside hosts and thus cannot be used to target the internal hosts for attack. Also using NAT, an organization with a small block of global addresses can allocate those addresses among the internal hosts so that all of the hosts can communicate with other hosts on the Internet.

In short, NAT has many advantages. But contrary to what is stated within the Office Action, it does not require that routing of performance information include local path characteristics, as recited in claim 8. It does not require that routing performance information include performance scores for routes, as recited in claim 9. And it does not require that performance scores are exchanged using a Local Preference Field, as recited in claim 10. Not one of these limitations is an inherent feature of NAT. For at least these additional reasons, claims 8-10 are also allowable over Wang.

Rejections under 35 U.S.C. § 103(a)

Within the Office Action, claims 14-23 are rejected under 35 U.S.C. § 103(a) as obvious over Wang in view of U.S. Patent No. 6,981,055 to Ahuja. The Applicants respectfully traverse these rejections.

Wang has been described above. Ahuja is directed to methods of and systems for optimizing routing traffic to a destination. Generally, Ahuja is directed to using performances of a subset of routes to infer performances of other routes. (Col. 3, lines 12-16) Ahuja discloses how to infer a performance for one route from the performance from another route. (Col. 9, lines 1-63) In one embodiment, Ahuja discloses a performance monitoring and inference component 102 coupled to a routing optimization component 104, which uses a BGP Bridge merely to transmit routing information to BGP routers 116. (Figure 2; col. 3, lines 55-57).

Like Wang, Ahuja does not disclose multiple RIUs or similar elements as recited in claim 14. The only intelligent unit that Ahuja arguably discloses is a routing optimization component. Nowhere does Ahuja disclose more than one of these components or provide any motivation for doing so. Accordingly, Ahuja does not disclose multiple (peer) decision makers (such as RIUs) that *exchange* either routing performance information or routing parameters among themselves, such as recited in claims of the present invention.

Claim 14 is directed to a method of exchanging routing parameters among a plurality of decision makers. Each decision maker controls a distinct subset of a plurality of routers, and the plurality of decision makers are in communication via a dedicated mesh. The method includes asserting a first plurality of preferred routes for a first plurality of prefixes to the subset of routers. The method also includes, concurrent with the asserting the first plurality of preferred routes, sending a plurality of local performance scores generated from performance measurements for the first plurality of routes to the plurality of decision makers using the dedicated mesh.

As explained above, neither Wang nor Ahuja, either alone or in combination, discloses exchanging a plurality of routing parameters. Also, neither Wang nor Ahuja, either alone or in combination, discloses concurrent with asserting a plurality of routes, also sending a plurality of performance scores. Finally, neither Wang nor Ahuja discloses using a dedicated mesh: The Internet (cited within the Office Action) is not "dedicated" to anything. Those skilled in the art will recognize that dedicated meshes, such as private lines, are. For at least these reasons, claim 14 is allowable over Wang, Ahuja, and their combination.

Claims 15-22 all depend on claim 14 and accordingly are all allowable as depending on an allowable base claim.

Response to arguments made in the Office Action

Within the Office Action, it is admitted that Wang does not disclose asserting a first plurality of preferred routes for a first plurality of prefixes to a subset of routers; and concurrent with the asserting the first plurality of preferred routes, sending a plurality of local performance scores generated from performance measurements for the first plurality of routes to the plurality of decision makers via a dedicated mesh, as recited in claim 14. It is then stated that Ahuja discloses these elements. It is stated that at col. 16, lines 37-54, Ahuja's discussion of "parallel" processing discloses the "concurrent" element of this claim. The Applicants disagree with this characterization of Ahuja.

At col. 16, lines 37-54, Ahuja merely describes how to process a routing matrix. Ahuja describes partitioning a routing matrix "so that portions can be solved in parallel." Partitioning a routing matrix, as described in Ahuja, has nothing to do with concurrently asserting routes and sending performance scores, as recited in claim 14. Accordingly, it is clear that Ahuja does not disclose this element of claim 14.

Claim 23 is not explicitly discussed in the Office Action

Although it is stated within the Office Action that claim 23 is rejected under 35 U.S.C. § 103(a), no explanation is given for this rejection. Because claim 23 recites, in part, a plurality of routing intelligence units, structure similar to that recited in claim 1, the Applicants submit that claim 23 is allowable for at least the same reasons as claim 1.

CONCLUSION

For the reasons given above, the Applicants respectfully submit that claims 1-23 are in condition for allowance, and allowance at an early date would be appreciated. If the Examiner has any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 so that any outstanding issues can be quickly and efficiently resolved.

Respectfully submitted,
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CERTIFICATE OF MAILING (37 CFR§ 1.8(a))

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